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10/576,108

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Oddvin Reiso

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12/16/2010

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EXAMINER

YANG, JIE

ART UNIT

PAPER NUMBER

1733

NOTIFICATION DATE

DELIVERY MODE

12/16/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/576,108 | <b>Applicant(s)</b><br>REISO ET AL. |  |
|                              | <b>Examiner</b><br>JIE YANG          | <b>Art Unit</b><br>1733             |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5, 7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5, 7 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/03/2010 has been entered.

### ***Status of the Claims***

Claims 1-4 and 6 have been cancelled, claims 5, 7, and 8 has been amended; and claims 5, 7, and 8 remain in examination. Claim 5 is an independent claim.

### ***Status of the Previous Rejection***

The previous rejection of claims 5, 7, and 8 under 35 U.S.C. 103(a) as being unpatentable over Shibata (JP 60204857, thereafter JP'857) has been withdrawn in view of the amendment filed on 12/03/2010.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

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the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 7, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parson et al (US 6,440,359 B1, thereafter, US'359) in view of Ohyama et al (US 6,355,090 B1, thereafter US'090).

Regarding claims 5 and 7, US'359 teaches an aluminum alloy of composition and incidental impurities up to 0.05 each 0.15 total, which can be extruded at high speed to provide extruded section which meet T5 and T6 strength requirements (Abstract of US'359), which reads on the aluminum alloy useful extrusion with impurities up to 0.15wt% as recited in the instant claim 5. The comparisons of compositions between the instant invention and US'359 are listed in following table. All of the major composition ranges disclosed by US'359 (Table 1, claims, and examples of US'359) overlap the composition ranges of the instant invention, which is a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the claimed compositions Si, Mn, S, Cr, Zn, Cu, Fe, and Al as recited in the instant claims from the composition disclosed by US'359 because US'359 discloses the same utility throughout the disclosed ranges. SEE MPEP 2144.05 I. US'359 teaches optional adding Ti

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(0.007-0.01wt%) and B (0.001wt%) as grain refiners (Examples tables 1-3 and claim 1 of US'359), which read on the claimed grain refining element up to 0.1wt% as recited in the instant claim 5.

| Element | From instant Claim 5 and 7 (in wt%)         | US'359 (in wt%) | Overlapping range (in wt%)                  |
|---------|---|-----------------|---|
| Mg      | 0.35-0.5                                    | 0.2-0.34        | --  |
| Si      | 0.35-0.6                                    | 0.35-0.60       | 0.35-0.6                                    |
| Mn      | 0.03-0.06 (claim 5)                         | 0-0.15          | 0.03-0.06 (claim 5)                         |
| Cr      | 0-0.05                                      | Trace amount    | Trace amount                                |
| Zn      | 0-0.15                                      | 0.006-.007      | 0.006-.007                                  |
| Cu      | 0-0.1                                       | 0-0.25          | 0-0.1                                       |
| Fe      | 0.08-0.28 (claim 5);<br>0.18-0.25 (claim 7) | 0-0.35          | 0.08-0.28 (claim 5);<br>0.18-0.25 (claim 7) |
| Al      | Balance                                     | Balance         | Balance                                     |

US'359 does not specify adding 0.35-0.5wt%Mg in the alloy, US'090 teaches an aluminum alloy for automotive parts by extruded operation (Abstract, Col.11, lines 45-63, and table 3-4 of US'359). The major composition ranges disclosed by US'090 (Col.2, line 39 to col.3, line 56, and claims 5-8 of US'090) overlap the composition ranges of the instant invention. US'090 teaches adding 0.2-5.0wt%Mg in the alloy and more preferably adding 0.25-0.5wt%Mg in the alloy (Col.6, lines 29-30 of US'090), which overlaps the claimed range of 0.35-0.5wt%Mg as recited in the instant claim. Therefore, it would have been obvious to one of ordinary skill in the art at the time the

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invention was made to add a proper amount of Mg as demonstrated by US'090 in the alloy of US'359 because US'090 teaches the proper amount of Mg can enhance the strength of an aluminum wrought alloy (Col.6, lines 44-50 of US'090).

Still regarding claim 5, US'359 teaches the homogenization heat treatment for the alloy in order to bring the soluble secondary Mg-Si phases into suitable form (Col.4, lines 19-39 of US'359). US'359 teaches the intermetallics including Al(Fe,Mn)Si (Col.3, line 64 to Col.4, line 11 of US'359), which reads on the AlMnFeSi dispersoid particles as recited in the instant claim. US'359 teaches forming rather fine precipitate beta-Mg<sub>2</sub>Si which has the effect of reducing extrusion breakthrough pressure and of redissolving during extrusion so as to permit development of maximum tensile strength in age hardened extrusion. (Col.4, lines 35-29 of US'359), which reads on the limitation of forming Mg<sub>2</sub>Si particles during cooling after homogenization as recited in the instant claim.

Regarding claim 8, the claim is written in the product-by-process format. There is no evidence that the claimed process limitation would render the claimed product unobvious over the aluminum alloy of US'359 in view of US'090. See MPEP 2113. The Examiner further notes that US'359 specifies to perform the

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extrusion operation at temperature of 450°C (Col.7, lines 16-35 and Fig.14-15 of US'359), which is within the extrusion temperature range (430-510°C) as recited in the instant claim.

### ***Response to Arguments***

Applicant's arguments with respect to claims 5, 7, and 8 have been fully considered but they are not persuasive. Regarding the arguments which relate to the amended features in the instant claims, the Examiner's position is stated as above.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-2701884. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

/Jie Yang/  
Patent Examiner, Art Unit 1733